

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC. 20554**

<b>In the Matter of</b>	)	
	)	
<b>Changes in Part 97</b>	)	<b>RM-10869</b>
<b>With Regard to Amateur Radio</b>	)	
<b>Services Rules, Element 1</b>	)	
	)	

**To: The Commission**

**COMMENTS of Nickolaus E. Leggett  
N3NL Amateur Radio Operator**

The following is a set of comments from Nickolaus E. Leggett, an amateur radio operator. My comments are on the petition concerning Morse code and amateur radio filed by Mr. Ronald D. Lowrance, K4SX.

**Morse Code and Homeland Security**

Mr. Lowrance makes the point that Morse code operations can be quite useful in a high-intensity emergency where normal communications systems have been disabled. This capability of Morse code is especially appropriate for homeland security situations where hostile persons have sabotaged our high-technology communications systems.

**Long Duration Intense Emergencies**

One such situation is where Electromagnetic Pulse (EMP) is used to disable communications systems over a wide geographic area. In this situation, knowledgeable amateur radio operators can improvise Morse code communications systems using salvaged electronics components. Improvising Morse code transmitters is facilitated by the fact that Morse code is a simple on and off code. Thus the amateurs only have to build simple oscillator transmitters (“radio lightbulbs”) that can be rapidly turned on and

off to send messages by Morse code. Such transmitters can consist of a single transistor or vacuum tube and its associated resonant circuit components.

In such a long-duration emergency, one does not care about the quality of the signal transmitted as long as the receiving operator can understand it. As a result, very basic transmitter circuits can be used without any filtering. These transmitters would be like the simple breadboard transmitters that amateur radio operators built in the 1930s. Indeed, even improvised spark-gap transmitters would be useful in some circumstances.

### **Required Amateur Skills for Long Duration Emergencies**

Amateur radio operators must be skilled in electronics and in Morse code to provide this service of building communications systems out of scrap parts. Having some type of Morse code examination for amateur radio licenses encourages operators to learn the skill. In addition, knowing Morse code allows one to participate in the design, construction, and testing of simple low-power (QRP) Morse code transmitters and receivers. This is essentially a training ground for future situations where communications must be improvised on site.

Some observers have claimed that the need to improvise communications will never occur. Their claim is highly unlikely in the long-term war on terrorism. In this regard it is interesting to note a report on C-Span that terrorist groups are recruiting graduate electronics engineers. Such recruits would probably invent nasty surprises that would require hams and others to improvise communications devices on the spot.

### **Recommended Action**

The Commission should retain a Morse code testing requirement at least for the Extra Class license exam. I don't know that I would go as far as Mr. Lowrance suggests

in re-establishing Morse code. But I would keep a role for Morse code in amateur radio licensing.

**Respectfully submitted,**

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